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Power analysis in health policy and systems research: a guide to research conceptualisation

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ABSTRACT

Power is a growing area of study for researchers and practitioners working in the field of health policy and systems research (HPSR). Theoretical development and empirical research on power are crucial for providing deeper, more nuanced understandings of the mechanisms and structures leading to social inequities and health disparities; placing contemporary policy concerns in a wider historical, political and social context; and for contributing to the (re)design or reform of health systems to drive progress towards improved health outcomes. Nonetheless, explicit analyses of power in HPSR remain relatively infrequent, and there are no comprehensive resources that serve as theoretical and methodological starting points. This paper aims to fill this gap by providing a consolidated guide to researchers wishing to consider, design and conduct power analyses of health policies or systems. This practice article presents a synthesis of theoretical and conceptual understandings of power; describes methodologies and approaches for conducting power analyses; discusses how they might be appropriately combined; and throughout reflects on the importance of engaging with positionality through reflexive praxis. Expanding research on power in health policy and systems will generate key insights needed to address underlying drivers of health disparities and strengthen health systems for all.

Summary box

- Analysing how power shapes health policy and systems is critical to identifying underlying factors driving health disparities, health systems challenges and societal inequities.
- Power is complex to explore conceptually, theoretically and methodologically, and explicit analyses of power in health policy and systems remain relatively infrequent.
- There is no consolidated resource that provides health policy and systems researchers with an empirical, theoretical and methodological starting point on power.
- We introduce a new framework for identifying and refining discrete areas of inquiry for power-focused health policy and systems research.
- Theoretical and conceptual understandings of power are summarised and linked to a selection of methodologies and methods for conducting analyses.
- Illustrative examples of combining theory and methodology to analyse different levels of power in health policy and systems research are provided.
- Expanding research on power in health policy and systems in all contexts will generate insights needed to address underlying drivers of health disparities and strengthen health systems for all.

INTRODUCTION

Power is defined as the ability or capacity to 'do something or act in a particular way' and to 'direct or influence the behaviour of others or the course of events'.[1] Relationships of power shape societies, and in turn, health policies, services and outcomes.[2] Power dynamics—or the relational power that manifests in the interaction among individuals and organisations—also influence health systems, or 'the organizations, people and actions whose primary intent is to promote, restore or maintain health'.[3] The universe of power dynamics that are pertinent to the study of health policies and systems includes diverse types and locations of policy, social, implementation and political processes. Power dynamics have also influenced health systems planning and research, by defining what is seen as a health system, and the translation or adaptation of health systems models across distinct geographic contexts over time.[4 5]

Studying power is thus a core concern of researchers and practitioners working in the field of health policy and systems research (HPSR), an interdisciplinary, problem-driven field focused on understanding and

strengthening of multilevel systems and policies.[6] Accelerating theoretical development and empirical research on power in this domain is crucial for several reasons. First, it provides a deeper, more nuanced understanding of the mechanisms and structures that lead to social inequities and health disparities.[7] Second, it reveals historical patterns entrenched in health and social systems, allowing contemporary policy concerns to be seen in a wider context and lessons to be drawn from these trends.[8] Third, analysing power can contribute to the (re)design or reform of health systems to redress imbalances and progress towards improved health outcomes.[9]

Studies incorporating examinations of power in public health and HPSR have gradually increased in number, including, for example, analyses of accountability, political prioritisation, commercial determinants of health, determinants of universal health coverage and state sovereignty in health agenda setting.[10–15] Nonetheless, explicit analyses of power in HPSR remain relatively infrequent.[7 16] Lack of a power-specific lens may reflect the continued dominance of biomedical and behaviouralist approaches in health research and funding, limitations stemming from the political economy of research funding and agendas, and reluctance among institutions and individuals to examine their own role in perpetuating existing power dynamics.[17 18] Power is also complex to examine conceptually, theoretically and methodologically. Seminal publications providing guidance on different aspects of power research include Erasmus and Gilson's[19] paper on investigating organisational power; the health policy analysis reader edited by Gilson *et al*,[20] and Loewenson *et al*'s[21] methods reader on participatory action research (PAR). Recent resources also provide conceptual overviews of power.[7 9 22] However, there remains no comprehensive resource that can serve as a theoretical and methodological starting point for aspiring power researchers, irrespective of disciplinary orientation or area of HPSR interest.[16]

This paper aims to fill this gap, building on the above-mentioned resources but providing a more consolidated guide to researchers wishing to consider, design and conduct power analyses of health policies or systems. Recognising the expansive and interlinked nature of power relations, we focus this article on the different ways to research power as it manifests in health policies and systems. We also engage with literature on the social determinants of health insofar as these determinants impact health policies and systems.

This project emerged from the Social Science Approaches for Research and Engagement in Health Policy and Systems (SHAPES) thematic working group of Health Systems Global. SHAPES members (SMT, VS, MS and KS) with interest and expertise in power analyses reached out to the wider network and requested other interested researchers and practitioners to join the project. Recognising that expertise can take many forms, no criteria were placed on participation other than an interest in the topic and willingness to contribute to the paper's development. The group was ultimately comprised of researchers from academic institutions, research organisations and multilateral agencies, in both the Global North (eight) and Global South (six) all of whom have experiential knowledge of assessing and negotiating power in health systems at various levels, and a number of whom have published in this area.

The process to develop this resource began in 2019. Members of the original group (SMT, VS, MS and KS) first prepared an outline of the paper via virtual and email discussions among group members. That outline was then divided into sections on theory, methodology and reflexivity, and section leads were appointed by a process of consensus. Group members volunteered to work on a section or sections based on experience and ability to input. Literature was sourced from database searches combined with expert guidance from group members. Working group leads organised the work of these sections and led drafting. Section drafts were reviewed by each group and then the full group, and two external researchers were invited to provide feedback on specific aspects of the paper. Online supplemental appendix 1 illustrates the iterative process by which the ideas were conceptualised, synthesised and agreed on at different stages of the paper drafting. All authors also read and commented on at least one version of the final paper. As a whole, the project was collaborative and worked from the logic of crowd-sourcing among a diverse set of authors engaged in HPSR.

DOING POWER ANALYSES IN HEALTH POLICIES AND SYSTEMS RESEARCH

This paper outlines key considerations and principles for power analyses in health policies and systems research throughout the research cycle. The paper is divided into three sections. The first section starts by discussing the identification of a research topic and presents three overarching empirical 'sites'–or discrete areas of inquiry–for power-focused HPSR. The empirical sites offer a starting point for study design by providing researchers with ways to reflect on and refine their research question. This section also highlights researchers' positionality and its influence on the whole research process. The second section provides an introduction to (and tabular summary of) theories useful for analysing power, demonstrating each theory's relationship to one or more of the empirical sites. Finally, the third section of the paper introduces a selection of methodologies, considers their usefulness in the context of different types of power analyses and discusses how they, too, must be selected with consideration for the research question, the researcher's positionality and alignment with theory. The ideas presented in this paper apply to all geographic contexts; however, we draw largely on HPSR literature from low-income and middle-income countries. This paper does not engage extensively with the use of specific data collection tools or methods (eg, interviews, observations and

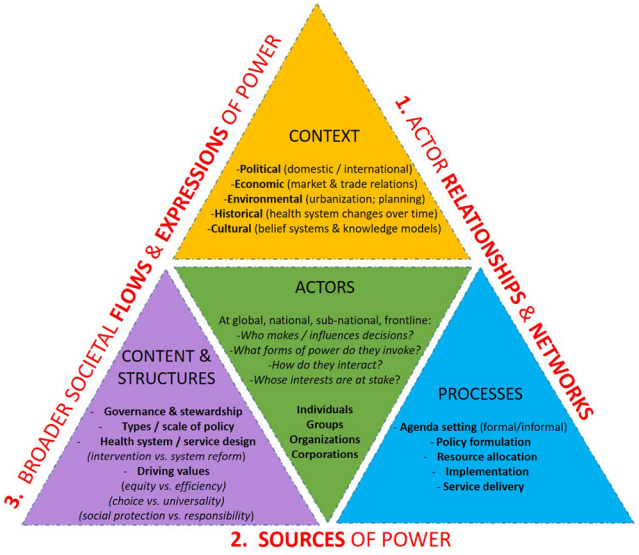

Figure 1 Three empirical sites of power research in health policy and systems.

document review) associated with a given methodology, as other resources address these topics in detail.[19 21 23 24]

Identifying a topic

Power is imposed, negotiated and contested in diverse ways in the context of health policy formulation and implementation and health systems functioning. Research into power in the field of HPSR generally focuses on how the 'expression' of power enables or blocks health system change or policy implementation and what types of power are implicated in the process.[16 20] From these two broad areas of focus, we discern three main sites of empirical work on power in the health policy and systems field, recognising that these three sites overlap significantly. These are: (1) actor relationships and networks; (2) sources of power and (3) societal flows and expressions of power.

In figure 1, we locate each of these empirical sites of power research around an adapted version of Walt and Gilson's[25] seminal Policy Triangle. This figure highlights that applied research on power cannot be conducted in isolation from the actors, context, content, structures and processes of the policy or system in focus. By demonstrating the link between actors, context, and structures and broad areas of power research, the three empirical sites are intended to provide a point of departure for the researcher to consider *what* is the issue or topic of interest. We expand on each of these empirical sites further below.

Empirical site 1: actor relationships and networks

The role and manifestations of power in *actor relationships and networks* comprise an important site of empirical research on power in HPSR. We list this site first because we understand health systems as *social systems*,[6] fundamentally shaped by the values, intentions and relationships of the human and organisational actors within them. As illustrated in the central green triangle in figure 1, questions about power relating to actor relationships and networks include foundational enquiries about which individuals and organisations make and influence (health) policy and system decisions, how they relate to one another and why.

Empirical site 2: sources of power

As outlined in Sriram *et al*[16] and Moon[22], a substantial body of theory is directed towards understanding how actors draw on power from particular sources.[16 22] Sources of power thus represent a second important grouping of research on power in HPSR. Some methodologies, particularly those based in political science and economic theory, can describe and problematise key sources of power, such as material capital; technical expertise; political and bureaucratic position and influence; and forms of cultural capital and power gained from title, education and knowledge. Resultant research can provide analyses regarding which actors are impacting processes, from where they derive their power and how their actions impact policy and systems. This empirical site focuses our attention on 'drivers of the drivers', surfacing the institutions, organisations and attributes that provide a fountainhead of power in HPSR.

Empirical site 3: societal flows and expressions of power

A third empirical site of power research in health policy and systems relates to the societal flows and expressions of power. Research on the exercise of power shows how power is expressed, leveraged and experienced to impact health policy and systems, and ultimately, health inequities. Reflecting the intersection among context, actors and structures, research related to flows and expressions of power can generate insights regarding how formal or informal institutions shape health policy-making and service delivery, or on the impact of prevailing ideologies regarding health policy on service delivery.[26 27] Researchers may focus on the ways that health policies and systems shape inequities[28] or the ways that different groups have accepted, adapted and subverted health systems, such as the dictates of colonial medicine[29 30] or neocolonial or internalised colonial forms of public health practice.[31 32]

ADDRESSING POWER WITHIN THE RESEARCH PROCESS: POSITIONALITY AND REFLEXIVITY

In the process of issue identification and throughout the research process, it is critical to recognise the contested relationships of power that shape research itself. The nature of evidence in the fields of global health and health policy and systems research is contested,[33–35] and the funding of evidence generation is politicised.[18 36] Researchers—whether investigating power or other aspects of health and society—must be willing to consider their own role as actors in a contested process. Health research broadly tends to reward—in professional status, resourcing and publishing–positivist and utilitarian

Table 1 Questions to guide reflections on power in health policy and systems research

Preliminary steps	► Why are you (or the group you are part of) interested in asking these research questions? ► Who do you expect will benefit from the outcomes of the research? ► Who is part of the research team and how have you engaged with issues of positionality, personal status, and diverse disciplinary backgrounds? ► Who are you intending to work with, and what individual, group, institutional or social dimensions of power may impact these partnership? ► What voices or perspectives, particularly those of individuals or communities with direct experience of your research topic, might you be missing? ► How will you address issues of representation in your work, whether in terms of study design or in terms of team composition?
Concurrent steps	► What are the mechanisms for capturing dissent or alternative views in the research process, both within the research team and with research participants and collaborators? ► When analysing data, how do you account for differences in power among and between research participants and researchers? ► What types of dialogue and consultations can you offer within the research team and/or partners and how frequently? ► Whose voices are loudest within the process and can you do anything to shift that dynamic? ► How are you building adaptive learning processes into the research to take into account diverse perspectives and modify your approach accordingly?
Concluding steps	► Who is included in the analytical process and are there opportunities to expand participation in 'meaning-making' work? ► How will you communicate and share the outcomes of your research, particularly with participants/respondents involved in the research? ► Are there mechanisms in place to broaden your reach beyond 'usual suspects' (ie, academic circles)? ► Have you put into place any process whereby data can be stored/archived in the places where it was gathered? ► Are equal opportunities given for authorship among the research team and/or with local collaborating institutions or individuals? ► What format will the publication(s) take and is there scope for writing in languages other than English and/or translation of results into other languages? ► What other formats may results be presented in other than peer-reviewed journal articles? ► If the work is going to be published in a peer-reviewed journal, will the resultant article(s) be open access?

approaches over humanistic and relativistic and/or interpretive ones,[36] Northern voices over Southern ones[37] and biomedical knowledge over other forms of knowledge.[38] Indeed the positionality of researchers is present in the many forms of power and privilege that can distance them from the issues they are analysing. Researchers' professional positionality in the political economy of global health, as well as their individual lived experiences and attributes relating to race, caste, gender, class, ability and more, can significantly influence the choice of questions and (as discussed further) theories and methodologies used to enact analysis of those issues.

How should researchers engage with these challenges? There is no straightforward mechanism by which to operationalise critical reflexivity. Instead, building on the work of Sultana,[39] Citrin,[40] Mafuta *et al*,[41] Abimbola[37] Keikelame and Swartz[42] and Pratt,[43] we offer a set of questions in table 1 to guide reflection on power as it impacts a given research project. Researchers should consider: for whom they are designing and conducting data collection and analysis and writing up findings? And, how does this influence 'bad habits' that pervade global health research?[44] However, discussions of power dynamics as they manifest in politics, social norms and otherwise is not a straightforward endeavour. Those who are brought in to collaborate in research processes, whether they be community members, health services representatives or funders, might be uncomfortable with an explicit focus on power relations. Shining a light on power asymmetries could create risks for collaborators or participants.

A conscious nurturing of critical reflexivity within all stages of a research process is a necessary component of ethical and rigorous praxis. However, analysing power while simultaneously maintaining awareness of the power relationships that structure the research endeavour itself is no easy feat. These questions and processes demand a more deliberative, bottom-up, time consuming approach to defining and answering research questions than is often enacted in HPSR. Prospective researchers of power should factor this time into their work. Since the political economy of global health and health policy and systems research can create incentives that undermine reflective, inclusive and transparent approaches to defining and answering research questions,[18] these considerations should be taken into account from this initial step through the dissemination of findings and beyond.

REFINING THE RESEARCH QUESTION WITH THEORY AND METHODOLOGY

The three empirical sites provide a launching pad for considering avenues for power inquiry for health policy and systems. In moving from a topic of interest to a more specific research question on power, and in conjunction with considerations of their own position and power, the researcher must consider their epistemological foundation (ie, what do we consider knowledge and how do we know it), the theories that provide a relevant analytical scaffolding, and concurrently, the methodologies that will enable appropriate collection, collation and analysis of data to that end.[45]

Thinking about theory

Theory helps to shape *what* we ask about power in HPSR. As a field, HPSR aims to generate research to inform policy and action[24]; this has implications for theory application, with the end goals of equity and justice often informing epistemological and theoretical positions.[16]

Some theories are foundational and address the nature of the state, society and human interaction; others are more operational in that they focus on discrete elements of the state, society and human interaction. As part of a process of reflexive research praxis, the entire research team should consider the guiding principles they wish to follow in their research and the implications that these choices have for theory choice and application. For example, researchers with applied interests may consider frameworks designed for this purpose, such as the PowerCube[46]; conversely, researchers seeking a deeper theoretical understanding of mechanisms driving power imbalances may consider foundational theories, such as Max Weber's sources of authority,[47]

HPSR as a field has developed in dialogue with theories of power from diverse disciplines from the social sciences and humanities, including philosophy, sociology, political science, anthropology, feminist theory, postcolonial and gender studies, history, and international relations, among others. Most of the foundational theories cited in peer-reviewed social science literature (eg, Marx, Gramsci, Bourdieu, Foucault and Haugaard; see ref 9) originated in high-income countries, reflecting and perpetuating the discursive and material power held by scholars and academic institutions in these contexts. Many of these theories were developed in the 19th and 20th centuries, and while they describe macro-level processes that are still salient, they were not developed with contemporary phenomena—such as the proliferation of mobile technology and social media—in mind. Some scholars developed critical theories to analyse and critique power structures from the point of view of the oppressed. Theories of domination originating from feminist, postcolonial, Marxist, queer or critical race theory, among others, have been used to describe structural determinants of health, health policy and healthcare, and healthcare-seeking behaviours.[48–50]

Many contemporary critical theories focus on the intersectionality of systems of subordination[51–53]; researchers have begun to suggest ways of applying these theories in health policy analyses.[54 55] Postcolonial literature and subaltern studies have not (yet) been applied extensively in HPSR[29] but have increasingly been cited in discussions about how to decolonise global health[37 42 56] and in recent scholarship on social inequities during the COVID-19 pandemic.[57]

Other frameworks used in HPSR, particularly those from public policy studies, draw insights from social science theories to explore power without necessarily invoking power explicitly, such as street-level bureaucracy theory[58] and diffusion theory.[22] In table 2, we provide an illustrative list and brief explanation of influential theories of power that have informed or been applied to studies assessing health determinants, health policy and health systems. We recognise that the approaches described in this paper do not capture the full breadth and complexity of this topic, and a more detailed version of this table can be found in online supplemental appendix 2.

Pairing theory with methodology

Different theories are better suited to analysing power asymmetries characterising each of the three empirical sites. With regards to empirical site 1, theories with potential for exploring actor relationships and networks may include Weber's three sources of authority[47]: street-level bureaucracy[58]; feminist standpoint theory,[50] critical race theory[48] and Bourdieu's fields.[59] Theories particularly relevant to examining the sources of power (empirical site 2) include Barnett and Duvall's taxonomy of power,[60] Bourdieu's 'fields',[59] Gramsci's concept of cultural hegemony[61] and feminist approaches.[50 62] Theories relevant to expansive questions regarding how power is expressed and manifest in society at large (empirical site 3) may include Foucault's concept of knowledge/power,[63] Veneklasen and Miller's 'expressions of power'[64] and Lukes' three faces of power.[65]

While theory helps to shape *what* we ask about power in HPSR, methodology shapes *how* we ask it and how we interpret the findings (figure 2). Below we provide an overview of 10 methodologies (broadly defined) that are of use in the context of the three empirical sites. The organisation of the methodologies under the empirical sites is merely illustrative. While some methodologies may be closely associated with a given empirical site (eg, social network analysis is associated with actor relationships and networks), many others are not. In conjunction with ongoing reflexive considerations of positionality, researchers choosing a methodology should consider their theoretical and epistemological position and the context of the research question, since the assumptions underlying the application of methodologies can be different (eg, the difference between an objectivist case study and an ethnography). Selection of methodologies should also consider for whom the research is being conducted, and whether the aim is to generate or further

Table 2 Select theorists and theories useful for research on power in health policy and systems

Theories useful for power analysis	*Key constructs/brief description*	*Core texts and examples of application*
	KEY THEORISTS and THEORIES	
Three faces and dimensions of power, Stephen Lukes	Influenced by Marx and Durkheim, Lukes claims power is exercised in three ways: (1) the power to decide, (2) the power not to decide (ie, to set the agenda and circumscribe the limits of debate), (3) the power to influence people's wishes and thoughts.	Lukes 2004[65] Buse and Hawkes 2014[120] Reynolds 2019[121]
Three sources of authority, Max Weber	Weber described political authority as legitimate domination, distinct from concepts of coercion and force. He defined three sources of political authority: traditional (derived from established customs and social structures), charismatic (derived from the individual leader's characteristics) and rational-legal authority (derived from the formal rules and laws of the state).	Weber 1948[47] Sriram *et al* 2018[122]
'Fields,' Pierre Bourdieu	Bourdieu proposed the concepts of fields – social domains characterised by specific logics and norms, and peopled by actors with varying levels of power. Actors in fields use forms of capital (economic, cultural, social or symbolic) to advance their self-interest and preferences.	Bourdieu 1990[59] Shiffman 2015[123] Behague *et al* 2008[124] Hanefeld and Walt 2015[125]
Biopower, Michel Foucault	Foucault's influential concept of 'power/knowledge' holds that rather than being an instrument of power, knowledge is constitutive and inseparable from it. In 'Discipline and Punish', Foucault discusses how modern institutions and techniques of control created systems of disciplinary power. He also contrasted older forms of 'sovereign' power, founded on violence, with modern 'biopower', which influences life by administration, optimisation and regulation.	Foucault 1978[126] Dalglish *et al* 2017[127] Sen *et al* 2020[14] Scott *et al* 2017[128]
Taxonomy of power, Michael Barnett and Raymond Duvall	Barnett and Duvall's framework seeks to understand how states negotiate policy processes in the international sphere. They differentiate between direct forms of power (*compulsory* power between actors, and *structural* relationships) and more diffuse forms (*institutional* power that favours some actors, and *productive* power over possession and distribution of resources).	Barnett and Duval 2004[60] Marten 2019[129] Moon 2019[22]
PowerCube, John Gaventa	Gaventa's PowerCube presents an operational model for the analysis of power. It depicts a dynamic relationship among three aspects of power – forms of power (based on Lukes' three faces of power) – visible, invisible and hidden power; spaces where power is exercised and claimed; and, levels of power – global, national or local.	Gaventa *et al* 2011[46] Nisbett *et al* 2014[130] McCollum *et al* 2018[131]
Expressions of power, Lisa VeneKlasen *et al*	The four categories of power in this framework include power over (authority over others), power to (individual powers to act on something), power with (to act with others or collaborations) and power within (the ability of a person to recognise their self-knowledge, abilities or a sense of self-worth).	Veneklasen and Miller 2002[64] McCollum *et al* 2018[131]
Cultural hegemony, Antonio Gramsci	Gramsci focuses on the concept of cultural hegemony, by which the state and the ruling classes use ideology, rather than violence, force, or economic modalities, to control and maintain capitalist power.	Gramsci 1999[61]; Worth 2002[132]
	THEORETICAL CONTRUCTS RELEVENT TO HPSR	
Feminist theories/domination	Although there are differences among various theories, feminist-informed theories broadly elevate important and previously underaddressed issues, most notably: the ways in which gender hierarchies shape health policies; what care is available; and the relationships among and between health sector employees and patients. In addition to exposing structures and manifestations of domination, feminist theories may be used as part of an approach that seeks to identify and foster empowerment and solidarity, both through research processes and results.	Young 2014[62] Morgan *et al* 2016[133] Theobald *et al* 2017[134] Parikh 2012[135]
Critical race theory	Critical race theory originated in US law schools in the 1980s as a way to understand how the law has been used to maintain white supremacy. Concepts and methods from critical race theory, including race conscious orientation, which require specific attention be paid to racism and its interpersonal and structural drivers, have been used to explore racial inequity in the context of health and health systems.	Borrell 2018[136] Hardeman *et al* 2020[137]
Necropolitics	Necropolitics builds on Foucault's idea of biopower as the state's ability to control and shape life, in contrast to the more traditional power of life and death over citizens. Necropolitics is the use of social and political power to control (differentially) how citizens live and die, with some (subjugated) bodies suspended between life and death, and has been used to understand inequities in health and the shortcomings of current global health governance and the pluralistic (ie, market infused or market dominated) sphere of public health.	Mbembe 2019[53] Lee 2020[138] Sandset 2021[57]
Subaltern studies/ postcolonialism/decolonisation	Subaltern people are those who are subordinated for reasons of class, caste, gender, race, language and culture; subaltern studies centres these people and the structures of subordination. Postcolonialism was initially developed in literary theory; it is concerned with narrative and representation and how this perpetuates hegemonic forms of knowledge and power. Decolonisation refers to the social science study of the process of decolonisation, as well as to a newer movement to 'decolonize global health' (and likely other fields and disciplines).	Spivak and Said 1988[139] Guha 1997[140] Caxaj 2015[141] Kingori and Gerrets[142] McPhail-Bell *et al* 2013[143 144]

Continued

Table 2 Continued

Theories useful for power analysis	*Key constructs/brief description*	*Core texts and examples of application*
	OPERATIONAL PUBLIC POLICY THEORIES	
Models of decision making in public policy	Various models of public policy decision making incorporate power in different ways. Buse *et al*, for example, list rational and incremental models of decision making, a mixed-scanning approach to decision making and the punctuated equilibrium model. Cairney *et al* developed a framework to study policy stability and change to explain differences among countries in tobacco control policy, as well as why policy did not reflect the public health evidence base. These approaches can be combined with other frameworks that interrogate power.	Etzioni 1967[145] Buse *et al* 2012[146 147] Dalglish *et al* 2019[147] Cairney *et al* 2011[148]
Political-economic determinants	Political-economic determinants of health highlight the power imbalances that emerge from the interplay between macroeconomic structures, ideas and policy.	Rushton and Williams 2012[149] Battams and Townsend 2019[150] Kentikelenis and Rochford 2019[151] Bump and Reich 2013[152]
Health and human rights	The right to an adequate standard of living and to medical services were included in the 1948 Universal Declaration of Human Rights; the right to health was included in the 1966 International Covenant on Economic Social and Cultural Rights. From the late 1980s, the field of 'health and human rights' coalesced as a way of understanding the human rights drivers and impacts of the HIV pandemic. Human rights provides a diagnostic or descriptive framework for research on the right to health, as well as solutions for how health and other government sectors should react to that research.	Mann 1996[153] Gruskin 2004[154] Freedman 2007[155] Yamin and Norheim 2014[156] Forman 2009[157]
Street-level bureaucracy	Initially developed by political scientist Michael Lipsky, the theory of street-level bureaucracy is concerned with state employees who interact with citizens in the everyday conduct of their tasks, such as police officers, local government officials and health providers. These bureaucrats have some degree of discretion in their interpretation and implementation of policies. From the perspective of community members, decisions and actions taken by street-level bureaucrats constitute government policy.	Lipsky 1980[58] Erasmus 2014[158] Walker and Gilson 2004[159]

HPSR, health policy and systems research.

refine a theory or produce more immediately actionable findings. A summary table of these methodologies may be found in online supplemental appendix 3.

To further make this point, table 3 provides illustrative examples of possible combinations of research question, theory and methodology. The inclusion in the table of two research questions at each of the different levels of health policy and systems function (micro, meso and macro) is intended to demonstrate (although incompletely) the breadth of potential inquiry as well as to showcase the specificity sometimes required to enable effective theoretical and methodological linkage. A key point made clear by the repeat

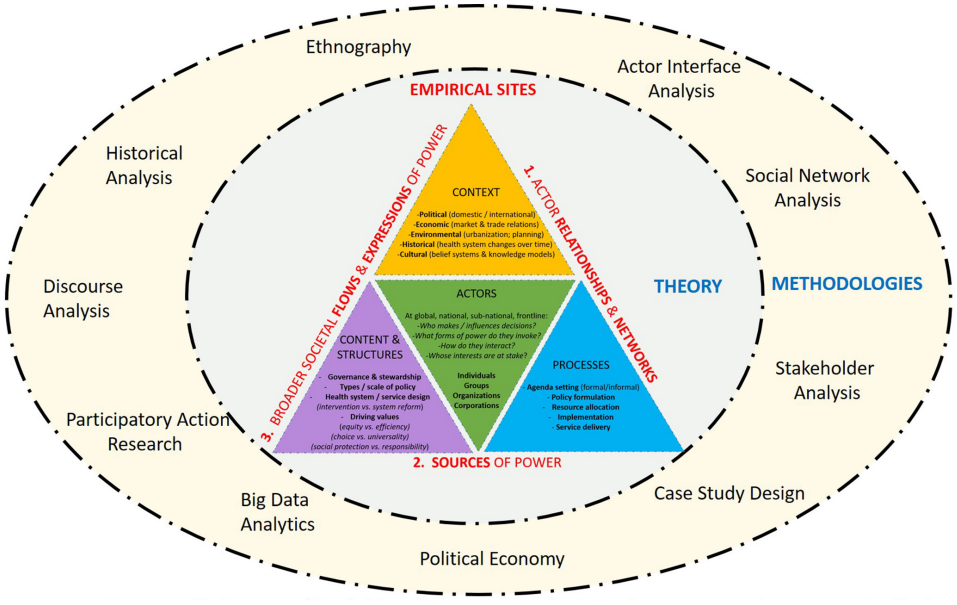

Figure 2 Linking empirical sites, theory and methodologies for research on power in health policy and systems research.

Table 3 Illustrative combinations of theory and methodology paired with research questions on power in HPSR

Socioecological level	Examples of research questions	Examples of potentially applicable theories	Examples of corresponding methodologies
EMPIRICAL SITE 1: ACTORS AND ACTOR NETWORKS			
Micro	*How does the degree of participatory leadership style among hospital and district health directors affect hospital staff roles in accountability processes?*	▶ Weber's three sources of authority. ▶ Lipsky's street level bureaucracy.	▶ Actor interface analysis. ▶ Case study.
	How does X peer communication and mentorship programme foster health advocacy and political capabilities within a racially diverse community of commercial sex workers?	▶ Gaventa's PowerCube. ▶ VeneKlasen *et al*'s expressions of power. ▶ Feminist theories. ▶ Intersectionality. ▶ Critical race theory. ▶ Subaltern theories. ▶ Health and human rights.	▶ Ethnography. ▶ Comparative case study. ▶ Actor interface analysis.
Meso	*In what ways do the social networks of public and private healthcare providers differ in terms of their relationships with state level health authorities and insurers? How might these differences affect the introduction of a regulatory regime for counterfeit antibiotics?*	▶ Bourdieu's fields. ▶ Policy transfer.	▶ Social network analysis. ▶ Historical analysis.
	How have the formal and informal channels of in-person communication regarding the liberalised abortion law shaped how the law is interpreted and practiced by health providers in rural areas of country X?	▶ Political systems. ▶ Lipsky's street level bureaucracy. ▶ Feminist theories. ▶ Health and human rights.	▶ Stakeholder analysis to develop line of enquiry methods. ▶ Actor interface analysis. ▶ Social network analysis. ▶ Case study. ▶ Ethnography.
Macro	*How did civil society representatives in country X leverage social and moral power conferred by their HIV status and other identities, to influence the country's proposal to the Global Fund to Fight AIDS, TB and Malaria?*	▶ Lukes' three faces of power. ▶ Bourdieu's fields. ▶ Foucault's power/knowledge. ▶ Gaventa's PowerCube.	▶ Actor interface analysis. ▶ Case study.
	What attributes of social networks among representatives of large corporations involved in the production, packaging and sale of food products, Ministers of Health, and Ministers of Trade, influence the role that Countries X, Y and Z played in WHO discussions regarding limitations on advertising of unhealthy food?	▶ Barnett and Duvall's taxonomy of power. ▶ Necropolitics. ▶ Postcolonial theory. ▶ Kentikelenis and Connor's power asymmetries in global governance for health. ▶ Rushton and Williams' frames, paradigms and power.	▶ Social network analysis. ▶ Actor interface analysis. ▶ Discourse analysis. ▶ Case study. ▶ Historical methods.
EMPIRICAL SITE 2: SOURCES OF POWER			
Micro	*In what ways does the discretionary power of frontline health workers influence the implementation of a new programme to provide home-based care for type 1 diabetes in country Y, and what are the determinants of how that power is exercised?*	▶ Lipsky's street level bureaucracy. ▶ Long's actor oriented perspective. ▶ Critical race theory.	▶ Ethnography. ▶ Case study.
	How do middle manager conceptions of biomedical expertise and primary healthcare shape the integration of community health workers into primary health centre teams?	▶ Critical race theory. ▶ Lipsky's street level bureaucracy. ▶ Feminist approaches. ▶ Intersectionality. ▶ Bourdieu's fields.	▶ Ethnography. ▶ Case study. ▶ Actor interface analysis.
Meso	*How do political authority, financial resources, cultural capital and technical expertise shape the performance of(health governance/research funding decisions) institutions in country X?*	▶ Bourdieu's fields. ▶ Weber's three sources of authority. ▶ Critical race theory.	▶ Historical methods. ▶ Ethnography. ▶ Case study. ▶ Political economy.
	How do conflicts of interest in the stewardship of public and private medical education shape the recruitment, distribution and competency of human resources for health in country X?	▶ Gaventa's power cube. ▶ VeneKlasen *et al*'s expressions of power. ▶ Grindle and Thomas' policy elites.	▶ Historical methods. ▶ Ethnography. ▶ Case study. ▶ Stakeholder analysis.

Continued

Table 3 Continued

Socioecological level	Examples of research questions	Examples of potentially applicable theories	Examples of corresponding methodologies
Macro	*How does the presence of supra-state, global trade institutions—such as the WTO or International Investment Agreements (IIAs)—differentially influence governments' capacity to control their health policy and programming?*	▶ Barnett and Duvall's taxonomy of power. ▶ Gramsci's cultural hegemony. ▶ Foucault's power/knowledge.	▶ Political economy. ▶ Discourse analysis. ▶ Case study research.
	What institutional and legal mechanisms can regulate tech companies developing artificial intelligence (AI) applications that collect and analyse real-time health data?	▶ New institutionalism. ▶ Rushton and Williams' frames, paradigms and power. ▶ Health and human rights.	▶ Political economy. ▶ Discourse analysis. ▶ Case study research.
EMPIRICAL SITE 3: SOCIETAL FLOWS AND EXPRESSIONS OF POWER			
Micro	*How do socioeconomic factors such as class, religion, ethnicity, gender and caste interact to shape the relative power dynamics of local-level health planning committees?*	▶ VeneKlasen *et al*'s expressions of power ▶ Gaventa's PowerCube. ▶ Critical race theory. ▶ Feminist theories/domination. ▶ Intersectionality.	▶ Ethnography. ▶ Case study research. ▶ Participatory action research.
	How do the relationships between health workers, their representative associations/unions and local politicians shape the practice of corruption, fraud and abuse at the facility-level, block-level and district-level?	▶ Ostrom's institutions for collective action. ▶ Street-level bureaucracy. ▶ Long's actor oriented perspective.	▶ Social network analysis. ▶ Ethnography. ▶ Case study.
Meso	*How do shifts in political parties or political regimes change explicit or implicit values driving sexual and reproductive rights and health policy?*	▶ Grindle and Thomas' policy elites. ▶ Gramsci's cultural hegemony. ▶ Necropolitics. ▶ Health and human rights.	▶ Discourse analysis. ▶ Historical methods. ▶ Case study. ▶ Political economy.
	How have colonial-era institutions, legislation and bureaucratic structures influenced health workforce policy at the national level in country Y?	▶ Max Weber's three sources of authority. ▶ Foucault's power/knowledge. ▶ Subaltern studies. ▶ Postcolonialism.	▶ Historical methods. ▶ Discourse analysis.
Macro	*How do multinational corporations strategise at the global and national-level to influence health policy in their interest? What countervailing forces or powers exist or form in opposition to this influence?*	▶ Rushton and Williams' frames, paradigms and power. ▶ Kentikelenis and Connor's power asymmetries in global governance for health. ▶ Gramsci's cultural hegemony. ▶ Policy transfer.	▶ Political economy. ▶ Discourse analysis. ▶ Case study research. ▶ Stakeholder analysis. ▶ Big data analytics.
	How is the foreign policy and geopolitical strategy of country 'Z" influencing the distribution of its COVID-19 vaccine supplies to other countries?	▶ Barnett and Duvall's taxonomy of power. ▶ Rushton and Williams' frames, paradigms and power. ▶ Kentikelenis and Connor's power asymmetries in global governance for health.	▶ Political economy. ▶ Case study research. ▶ Stakeholder analysis.

listings of theories and methodologies across the various questions in table 3 is that there are many valid combinations of theories and methodologies.

USEFUL METHODOLOGIES FOR EMPIRICAL SITE 1: ACTOR RELATIONSHIPS AND NETWORKS

Stakeholder analysis is an actor-oriented methodology useful for examining the power differentials of key policy and health system actors, ranging from frontline healthcare workers to national level policy makers.[20] Stakeholder analysis is most commonly used prospectively, as a tool for researchers and practitioners to understand the feasibility of a given policy and to develop responses to likely challenges in implementing that policy.[66] Stakeholder analysis can also be used retrospectively, as a stand-alone study or in combination with political economy and case study approaches. Stakeholder analysis is also commonly used to consider sources of power, described in further detail below.

Actor interface analysis focuses on understanding individual actors (rather than organisations), examines policy through the lens of power struggles between individuals and explores how this behaviour is embedded in actors' lived experiences and values, called actor *lifeworlds*.[67 68] When used to study health policy, actor interface analysis examines how interactions among different actors shape the implementation and outcomes of the policy. Where actors interact, collaboration, contestation or resistance can be identified and analysed. This methodology brings an actor-centric lens

to the study of power in policy implementation as compared with other (more institutionally focused) methodologies and helps to examine how policy-related decisions and action are shaped by the actors themselves.[67 69 70]

Social network analysis is the quantitative study of relationship patterns among actors, with actors being broadly defined to potentially include people, groups or organisations.[71 72] This methodology draws from sociology and mathematical foundations of graph theory to illuminate how the nature of actors and ties (eg, number, strength and type of tie, such as friendship, supervisory relationship and whether information, resources or beliefs were shared) enable expressions and tools of power (eg, money, pressure, influence and knowledge) to be concentrated, spread or blocked.[73] In the field of HPSR, social network analysis can be used to analyse the health system structure as it functions, including through informal personal relationships, rather than as it is formally defined.[74] This can inform policy makers about how ties among actors can influence the diffusion and implementation of health reforms and programmes; how social networks influence governance and financing structures; as well as informing the public about how policy makers may be using power to include or exclude certain actors.[71 75 76]

USEFUL METHODOLOGIES FOR EMPIRICAL SITE 2: SOURCES OF POWER

Case study design is a form of empirical inquiry characterised by an 'intense focus on a single phenomenon within its real-life context'[77] and is particularly useful in situations where boundaries between the phenomenon of interest and the context are blurred. In relation to power in HPSR, case study research has most commonly been used to produce exploratory and explanatory accounts focusing on different actors' expressions of power (formal and informal, overt and covert) to answer 'how?' and 'why?' certain health policy or system features exist and to assess efforts to change power dynamics.[20 78] By combining an interpretivist (seeking to understand individual and shared social meanings) and critical (questioning one's own and others' assumptions) analytical approach, researchers may use this methodology to consciously account for the ways in which broader social and political environments influence both macropower and micropower dynamics.[79 80] Comparative case studies can be used for theory building or theory testing.

Political economy analysis is a methodology used to identify and describe structures such as government and the law; resources (labour, capital, trade and production) and how they are distributed and contested in different country and sector contexts, and the resulting implications for policy and indicators of well-being.[81] Of relevance to HPSR, political economy can draw on both quantitative and qualitative methods to explore the nature of the political landscape through mapping the power and position of key actors. Political economy can also explore how the distribution of resources influence relationships and through this the feasibility and trajectory of policy reform over time.[81 82] Reflecting their roots in the comparatively more positivist paradigms of political science and economics, these methodologies have been used for purposes of explanation and hypothesis testing in HSPR, including in the context of evaluations and policy design. Consistent with HPSR's multidisciplinary orientation, political economy methodologies can nonetheless be developed and deployed in a way that accommodates—or even centres—interpretive goals.

Big data analytics examines high volume, biological, clinical, environmental and behavioural information collected from single individuals to large cohorts at one or several time points.[83] Big data analytics can uncover patterns in health outcomes and health behaviours[84]; health policy (eg, resourcing and implementation fidelity)[85]; and health system function (eg, provider behaviours).[86 87] When applied in conjunction with a power lens, big data analytics can reveal important and often masked trends or patterned experiences, prompting further explanatory work or evaluative action.[88] For example, Yu *et al*[89] use big data analytics to explore the influence of private medical providers in promoting unnecessary medical interventions.[89] Big data analytics may also help identify systemic issues such as discrimination, information asymmetry and patient-provider dynamics and their influence on care quality. Nonetheless, given its volume as well as its potential interest to profit seeking entities, big data presents unique challenges for ethics, boundaries and reflexivity. Researchers should carefully consider the potential misuses of the data, the extent to which the data accurately represents the factors of interest (construct validity) and which individuals and groups are overlooked in analyses that focus on the mean (or median).[90]

USEFUL METHODOLOGIES FOR EMPIRICAL SITE 3: SOCIETAL FLOWS AND EXPRESSIONS OF POWER

Discourse analysis entails close examination of the use of language in texts (such as laws, policies, strategy documents or news media articles) and oral communication (such as transcribed interviews, debates or speeches) to describe the ways in which communicative acts construct shared understandings of what is normal[91 92] and what is possible, legitimate, or true.[63] Discourse analysis should include the study of what is present in the text, as well as what is assumed or ignored, shedding light on often unacknowledged material asymmetries and social hierarchies that pervade health policy-making at all levels.[93 94] In this way, discourse analysis can expose and problematise dominant paradigms in global and domestic health policy-making, such as the ways that standard epidemiological risk factors obscure structural inequities,[95] the assumption that the private sector will act in the public interest[96] or that a primary function of government reproductive health programmes is to decrease the fertility rate, rather than enable reproductive autonomy.[97]

Ethnographers seek to understand how humans in groups interact, behave and perceive, and how meaning and value are established. Ethnography can build rich and holistic understanding of people's perspectives, practices and cultural context[98] and focuses on depth over breadth, immersive observation in natural settings (eg, non-experimental

conditions), exploratory (rather than hypothesis testing) research and describing the meaning and function of human action in context.[99 100] While ethnography has its origins in colonial conceptions of 'culture' and colonial motivations to study them and has thus been frequently used to 'study down',[101] ethnography has also been employed to research 'up, down and sideways'.[102] This includes work focusing on institutions and politics, political legitimacy, moral universes, tacit knowledge and discourses to provide insight into how power is constructed, solidified and wielded within and beyond health systems,[103 104] the development and normalisation of certain forms of knowledge[105] and the implicit or explicit privilege or denigration of individuals or marginalised groups accessing healthcare.[106]

Participatory action research (PAR) seeks to build new *understandings* of power while also *changing* power relations. PAR seeks to shift control over the construction of knowledge and truth from the historically privileged to the historically marginalised[107 108] and increase participant understandings of injustice (conscientisation)[109] in order to build solidarity[110] and transform systems and institutions. PAR explores and recognises different sources of power (eg, social position, nationality and cultural knowledge) and applications of power (eg, via citizen-led collective action[111]). This research methodology typically entails the use of tools, such as community meetings, resource mapping, problem identification, visioning and diaries that draw out the priorities and perspectives of the communities participating, rather than reflecting a priori theory. It is apt for exploratory questions, as well as for bringing stakeholders together to cocreate solutions to health systems challenges.[112]

Historical research aims to generate or regenerate explanatory narratives relating to past events, places or people. Historical evidence includes visual, audio and text-based materials (archival material, communications, policy documents and project reports) and first-person accounts (oral histories). The study of history can illuminate broad power-related themes that continue to be relevant, such as the interface between individual liberty and domestic governmental health objectives[113]; medical experimentation, social control and scientific racism[114 115]; corporate profit making, governmental interference and population health[116]; and global health as a vehicle for state-craft, diplomacy, population control and Western-centric conceptions of charity.[8 97 117–119] Historical studies also offer broader explanatory value as 'cases' for the development of theory related to power[27 28] and as case studies for contemporary policy debates. Insofar as traditional historical approaches can privilege written work, it may omit the perspectives of historically oppressed groups. To combat this tendency, alternative methods such as participatory oral historical or community-based sourcing of visual, audio and text-based records not located in 'official' repositories open up alternative analytical possibilities.

CONCLUSION

More research on power in health policy and systems is needed. Linking empirical inquiry with theory and methodologies, with attention to positionality strengthens the rigour of such research and can help improve the depth and breadth of knowledge regarding root causes of inequities in health. This paper guides readers through the multiple stages involved, and a range of theories and methodologies that may be used, in developing a study focused on power in health policy and systems. It also seeks to push the HPSR field to challenge the political economy of research and destabilise hierarchies of knowledge through greater honesty about how power dynamics influence the research endeavour itself. Through the analysis of power in health policies and systems, we encourage researchers to expand the boundaries of how we may address inequities of health, to surface new insights, theories and approaches pertaining to power and, ultimately, to contribute to a more just world.

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